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## SCIENCE:

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THE VARIOUS MEDICAL ASSOCIATIONS and the medical profession will be glad to learn that Dr. John S. Billings, surgeon in the United States Army, has consented to take charge of the "Report on the Mortality and Vital Statistics of the United States," as returned by the eleventh census. As the United States has no system of registration of vital statistics, such as is relied upon by other civilized nations for the purpose of ascertaining the actual movement of population, our census affords the only opportunity of obtaining any thing near an approximate estimate of the birth and death rates of much the larger part of the country, which is entirely unprovided with any satisfactory system of State and municipal registration. In view of this, the Census Office, during the month of May this year, will issue to the medical profession throughout the country 'physician's registers' for the purpose of obtaining more accurate returns of deaths than it is possible for the enumerators to make. It is earnestly hoped that physicians in every part of the country will co-operate with the Census Office in this important work. The record should be kept from June 1, 1889, to May 31, 1890. Nearly 26,000 of these registration-books were filled up and returned to the office in 1880, and nearly all of them used for statistical purposes. It is hoped that double this number will be obtained for the eleventh census. Physicians not receiving registers can obtain them by sending their names and addresses to the Census Office; and with the register, an official envelope, which

requires no stamp, will be provided for their return to Washington. If all medical and surgical practitioners throughout the country will lend their aid, the mortality and vital statistics of the eleventh census will be more comprehensive and complete than they have ever been. Every physician should take a personal pride in having this report as full and accurate as it is possible to make it. All information obtained through this source will be held strictly confidential. It is equally important to the country that the returns in relation to farm-products and live-stock should be full and correct. The enumerator in the house-to-house visit he will make during the month of June, 1890, is constantly met with the fact that farmers keep no books, and hence returns are not infrequently guess-work. The census year begins June 1 next, and ends May 31, 1890. If farmers throughout the country would note this fact, and keep account of the products of their farms during the census year, it would be of material aid in securing reliable returns for the eleventh census.

SOME ONE RECENTLY SENT Professor C. M. Woodward, director of the Manual Training School, Washington University, St. Louis, Mo., a copy of a small periodical called "Microcosm," in which there was a prize essay by a Mr. Reuben Hawkins of Chillicothe, Mo., which has some interest. This article Professor Woodward picks to pieces in *The Teacher* for May. The author begins by quoting the familiar ideal experiment of firing a cannon-ball horizontally from the top of a tower, under the assumption that the force of gravity is constant, and that there is no resisting medium. The question is as to the time occupied in reaching a lower horizontal plane. Mr. Hawkins says that the common answer that the time occupied by the projectile is the same as the time occupied by a ball falling vertically from the muzzle of the gun to the same horizontal plane, is wrong, and his prize money is won by an argument in support of his assertion. Professor Woodward states that he has no idea who Mr. Hawkins is, nor does he know what facilities he has had for acquiring correct notions of mechanics and correct methods of reasoning, and had his essay not been indorsed by the editor, A. Wilford Hall, Ph.D., LL.D., in a commendatory note as well as by a prize, he should not have spent a moment on it. But when he sees such unspeakable trash commended and rewarded by a man who claims to have some understanding of the principles of physics, he feels constrained to protest. Mr. Hawkins's argument begins with some propositions in regard to the resultant of two forces acting on the same body, substantially as follows: If two equal forces act in direct opposition, the resultant is nothing. If two equal forces act in the same direction or in conjunction, the resultant is equal to their sum, or twice one of the component forces. Now, if one of the forces is turned to a mean position between the two just considered, that is, to a position at right angles to the second force, or in "half position" as Mr. Hawkins calls it, the resultant must be the mean of the former resultants. The mean of zero and two is one. Hence the resultant of two forces at right angles to each other is just equal to one of them. All this, and more of the same kind, Dr. Hall indorses as follows: "The foregoing article from the able pen of Mr. Hawkins was written substantially before our prize offer was published. From its highly scientific character, however, and from the fact that this number of the *Microcosm* will reach more than twenty thousand professors and teachers, we deemed it important to give it the position of Prize Essay No. 1." How far such teaching may do mischief is a question, but its existence is worthy of occasional note.

## RECENT DISCOVERIES IN CENTRAL AFRICA.

THE results of Van Gèle's exploration of the Obangi, of Junker's discoveries on the Upper Welle, Stanley's great journey up the Aruvimi, and Delcommune's ascent of the Lomami, have materially added to our knowledge of Central Africa, the river systems of